REMARKS

Claims 3, 7, 13-16, 21, 24-26, 28-29, 32-34, and 36-43 are pending in the present application, claims 9-12 and 35 having cancelled without prejudice or disclaimer herein. The Office Action and cited references have been considered. Favorable reconsideration is respectfully requested.

Claims 3, 9, 10, 13, 14, 24-29, and 38-41 were rejected under 35 U.S.C. §101, as allegedly being directed to non-statutory subject matter. The claims have been amended to overcome this rejection, and now are performed on a particular machine. Withdrawal of this rejection is respectfully requested.

Applicant notes with appreciation the indication that claim 36 would be allowable over the prior art if rewritten form.

Claims 3, 7, 8-16, 21 and 38-41 were rejected under 35 U.S.C. §103 as being unpatentable over Ali (U.S. Patent Application No. 2003/0161399) in view of Kim (U.S. Patent No. 6,289,049) and Dakss (U.S. Patent No. 7,367,042). Claims 24-27, 29, 32-35, 42, and 43 were rejected under 35 U.S.C. §103 as being unpatentable over Ali, Kim, Dakss and Naveen (U.S. Patent No. 6,243,495). These rejections are respectfully traversed for the following reasons.

Claim 13 has been amended according to FIG. 11 and the corresponding description in the specification. Apparatus claim 15 corresponds to method claim 13. Claim 21 depends on claim 13 or 14 in step (b).

Claim 13 recites a method of tracking moving objects in time-series

pictures by processing the pictures using a processor, each picture being divided into

blocks, each block consisting of a plurality of pixels, wherein in a case where an object-

identification code of moving object is assigned in a unit of block, and a motion vector of

moving object is determined in a unit of block, and wherein object-identification codes of

a plurality of moving objects on a picture at a time t1 have been determined. The

method, using the processor, comprises the steps of determining each object-

identification code and moving vector as approximate values of each of the blocks on a

picture at a time t2 on the basis of a first estimation function, determining a value of a

second estimation function using the approximate values, and determining each object-

identification code and moving vector as a solution of each of the blocks on the basis of

an approximately-optimum sum of the first and second estimation functions, wherein the

approximately-optimum sum is obtained by changing the approximate values within a

given range. The first estimation function has the sum of a sub-estimation function for

determining a moving vector by block matching between a current block on the picture

at the time t2 and a region on the picture at the time t1 and a sub-estimation function

for determining an object-identification code of the current block on the basis of a count

of pixels belonging to the same object-identification code within the region. The second

estimation function includes respective absolute values of differences between the

motion vector MV between the current block and the region and a motion vector of each

of blocks around the current block, each of the blocks having the same object-

identification code as that of the current block, and takes a more optimum value when

the sum of the absolute values is smaller. This is not taught, disclosed or made obvious by the prior art of record.

Thus, claim 13 has been amended to reflect the steps disclosed S13-S15 in Fig. 11, and the accompanying description in at least para. [0149]-[0151] of the published application. Applicant respectfully submits that the prior art, whether taken alone or in combination does not disclose the steps reflected in claim 13.

Regarding claim 38, in step (b), the correlation relates to the same first identification code of temporally adjacent pictures as shown in FIG. 19, OBJ1(t) and OBJ1(t-1) for example. Furthermore, step (b) is combined into step (c). These features are new and unobvious over the prior art, and Applicant respectfully submits that there is no disclosure or suggestion anywhere in the references of these claimed features

Apparatus claim 39 corresponds to method claim 38, and is believed to be patentable at least for the same reasons. Claim 40 depends on claim 13 or 14 in step (b2).

Claim 42 is a combination of original claims 42 and 27, and more clearly defined to distinguish it from the citations. The last paragraph regarding time t1, which corresponds to t in FIG. 25 for example, is new and unobvious over the prior art, and Applicant respectfully submits that there is no disclosure or suggestion anywhere in the references of these claimed features. Apparatus claim 43 corresponds to method claim 42, and is believed to be patentable at least for the same reasons.

In view of the above amendment and remarks, Applicant respectfully requests reconsideration and withdrawal of the outstanding rejections of record.

Applicant submits that the application is in condition for allowance and early notice to this effect is most earnestly solicited.

If the Examiner has any questions, he is invited to contact the undersigned at 202-628-5197.

Respectfully submitted,

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